

REMARKS

Claims 22-83 and 87 have been withdrawn from consideration in response to the Restriction Requirement dated October 1, 2003. Claims 15, 16, 22-83 and 87 are hereby canceled from the present application. Claims 88-94 are new. The claims remaining in the application are 1-14, 17-21, 85, 86, and 88-94.

Support for the amendments to claim 1 are found at page 9, line 28 through page 11, line 11 of the specifications. This section of the specifications also provides support for new claims 89-90.

Rejection Under 35 U.S.C. § 112

The Examiner has rejected claims 8 and 11-17 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

The Examiner notes that a number of features covered in the claims are missing from the drawings. The claim limitations the Examiner cites as missing include "a control logic processor." The Examiner's attention is drawn to Figure 1, which shows a control logic processor identified by numeral 22. Therefore, this feature is shown in the drawings.

The Examiner states that a "bias voltage to the spatial light modulator" is not shown. A lead line from the control logic processor to the spatial light modulator has been identified by numeral 25. The Parts List and specifications has also been updated with this information.

The Examiner's comment that a "display image is image retentive" is not shown, is not understood. Figure 1, numeral 40, refers to a "display surface." One characteristic of the display surface, at least in one embodiment, is that it is image retentive. It is not understood how the Examiner expects characteristics of components of an apparatus to be shown in a drawing.

The limitations in claim 11 relating to "interchangeably mounting either direct view projection lenses or screen lenses" has been deleted. The features for "hue control" and for "intensity control" have been added to the drawings and are referred to respectively by numerals 29 and 13.

Claims 15 and 16, dealing respectively with "a touch pad" and "a touch screen" have been canceled.

The Examiner has rejected claims 1-4, 6-7, 9-10, 18-19, 21, and 84-86 under 35 U.S.C. 103(a) as being unpatentable over Richards (U.S. Patent No. 6,388,661 B1) in view of Tanaka et al. (U.S. Patent No. 6,388,649 B1). This rejection is respectfully traversed.

The Examiner has rejected claims 5 and 20 under 35 U.S.C. 103(a) as being unpatentable over Richards and Tanaka et al. as applied to claim 1 above, and further in view of Dawson (Pub. No. U.S. 2002/0021832 A1). This rejection is respectfully traversed.

Richards '661 discloses use of a spatial light modulator for a video display system to generate grayscale and full scale video images. In particular, as shown in Figure 1 of Richards '661, the spatial light modulator is a "micromirror SLM-based projection display system."

In contrast to Richards '661, the present invention is for providing a "monochromatic beam from color digital data." The Richards '661 reference is used to provide grayscale or full color and does this by using a "micromirror SLM." As the Examiner notes Richards '661 "does not show a control logic processor for modulating a bias voltage." This is because the micromirror type SLM does not require a bias voltage that is a function of wavelength and functions in a totally different manner than the spatial light modulators of the present invention.

As noted by the Examiner Tanaka et al. '649 discloses a SLM which uses a control logic processor to "maintain input/output light characteristics... constant." This is in contrast to the present invention wherein the control logic is used for synchronizing the bias voltage of the spatial light modulator with the variable filter such that the resultant modulated beam is essentially monochromatic. Synchronizing a bias voltage of a spatial light modulator in coordination with the change in a variable filter is different than modulating an intensity.

Combining Richards '661 and Tanaka et al. '649 would not produce a device claimed as in the present patent application. Adding the single function found in Tanaka et al. '649, intensity control, to the micromirror spatial light modulator of Richards '661 would not produce an apparatus which takes a multicolored light beam and synchronizes a bias voltage to a spatial light modulator with a variable filter to produce a monochromatic output beam.

CONCLUSION

Dependent claims not specifically addressed add additional limitations to the independent claims, which have been distinguished from the prior art and are therefore also patentable.

In conclusion, none of the prior art cited by the Examiner discloses the limitations of the claims of the present invention, either individually or in combination. Therefore, it is believed that the claims are allowable.

If the Examiner is of the opinion that additional modifications to the claims are necessary to place the application in condition for allowance, he is invited to contact Applicant's attorney at the number listed below for a telephone interview and Examiner's amendment.

Respectfully submitted,



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Enclosures: Replacement Figure 1
Annotated Sheet Showing Changes
Copy of Letter to Official Draftsperson
Copy of Formal Drawings